A SYSTEM AND METHODOLOGY FOR CALCULATING THE COST OF FUTURE SEMICONDUCTOR PRODUCTS USING REGRESSION ANALYSIS OF HISTORICAL COST DATA

ABSTRACT

A method and structure for predicting semiconductor product costs at a fabricator entailing a storage medium which includes a database of historical critical dimensions and historical critical groundrules correlated to cost functions at the fabricator. The user interface has user inputs for new design parameters and new critical groundrules associated with a new device to be produced at the fabricator and a computer adapted to receive the user inputs, extract data from the storage medium, and compute semiconductor costs for the new device. The historical critical dimensions and the new critical dimensions are gate dimensions and the new critical dimensions are smaller than the historical critical dimensions. This device includes a future technology generation. Fabrication hardware and fabrication methods for producing the future technology generation are unknown and the relationships comprise base models and models that include options. The relationship comprise models that illustrate that costs increase exponentially as the historical critical dimensions and the historical critical groundrules are reduced.